

What is claimed is:

1. A hydrodynamic bearing system, comprising:  
a shaft having an axial bore formed therein;  
a radial bearing rotatably supporting said shaft;  
at least one annular thrust plate mounted on said shaft;  
a fixing element affixing said thrust plate to said shaft, said fixing element being inserted into said axial bore of said shaft; and  
a counter bearing corresponding to said thrust plate,  
wherein said axial bore is formed in an area where said thrust plate is to be positioned, and wherein an outer diameter of said fixing element is greater than an inner diameter of said axial bore.
2. The hydrodynamic bearing system according to claim 1, wherein said fixing element is a sphere.
3. The hydrodynamic bearing system according to claim 1, wherein said shaft further comprises at least one annular groove formed around a circumference of said shaft in said area where said thrust plate is to be positioned.
4. The hydrodynamic bearing system according to claim 1, wherein said thrust plate is arranged in a sliding fit, a transition fit or a press fit on said

shaft.

5. The hydrodynamic bearing system according to claim 1, wherein said thrust plate is set at a right angle in relation to said shaft.